

IN THE CLAIMS:

Please cancel claims 2 and 9 without prejudice to or disclaimer of the subject matter therein.

Please amend claims 1, 3-4, 6-8, 10-16 and 19-20 as follow:

1. (amended) A catalyst for addition [polymerisation] polymerization of olefinically unsaturated monomers comprising:

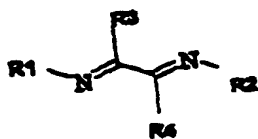
a) [A] a first compound MY [where:] wherein M is a transition metal in a low valency state or a transition metal in a low valency state [co-ordinated] coordinated to at least one [co-ordinating] coordinating non-charged ligand[.]; and Y is a monovalent, divalent or polyvalent counterion;

b) [An] an initiator compound comprising a homolytically cleavable bond with a halogen atom; and

c) [An] an organodiimine, [where] wherein at least one of the nitrogens of the diimine is not part of an aromatic ring.

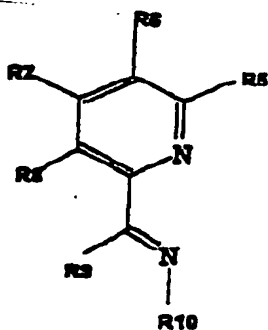
2 ~~3~~ (amended) A catalyst according to claim 1 wherein the organodiimine is selected from the group consisting of:

a 1,4-diaza-1,3-butadiene



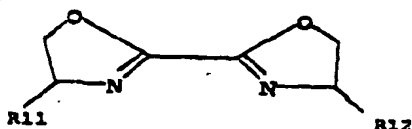
Formula 24,

a 2-pyridine carbaldehyde imine



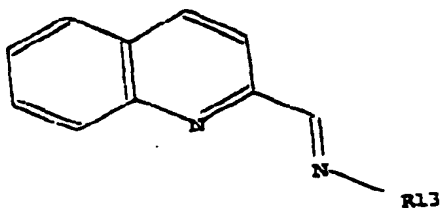
Formula 25,

an oxazolidone



Formula 26,

or a quinoline carbaldehyde



Formula 27,

[where:] wherein R₁, R₂, R₁₀, R₁₁, R₁₂, and R₁₃ are independently selectable and may be selected from the group consisting of H, straight chain, branched chain or cyclic saturated alkyl, hydroxyalkyl, carboxyalkyl, aryl, CH₂Ar, [(where] wherein Ar is aryl or substituted[]], or a halogen;

R₃ to R₆ are independently selectable and may be selected from the group consisting of H, straight chain, branched chain or cyclic alkyl, hydroxyalkyl, carboxyalkyl, aryl CH₂ Ar, a halogen, OCH_{2n+1} [(where] wherein n is an integer of 1 to 20[]], NO₂, CN, O = CR [(where] wherein R = alkyl, aryl, substituted aryl, benzyl PhCH₂ or a substituted benzyl[]].

Claim 4, line 1, after "from" insert --the group consisting of--;

line 4, replace "or" with --and--.

Claim 6, line 3, after "from" insert --the group consisting of--;

line 4, replace "or" with --and--.

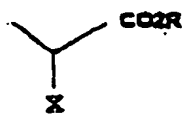
Claim 7, line 2, after "from" insert --the group consisting of--.

Claim 8, line 2, after "from" insert --the group consisting of--.

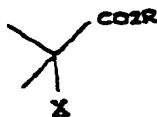
~~8~~ 10. (amended) A catalyst according to claim 1, wherein the initiator is selected from
the group consisting of:

RX

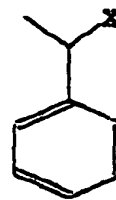
Formula 2,



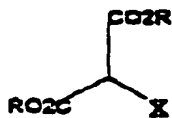
Formula 3,



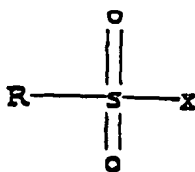
Formula 4,



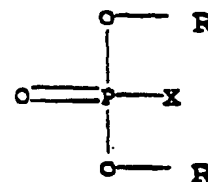
Formula 5,



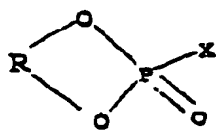
Formula 6,



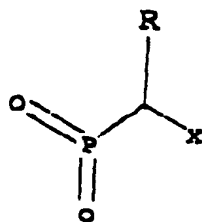
Formula 7,



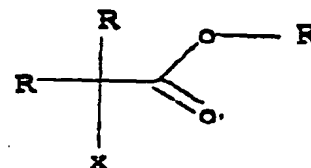
Formula 8,



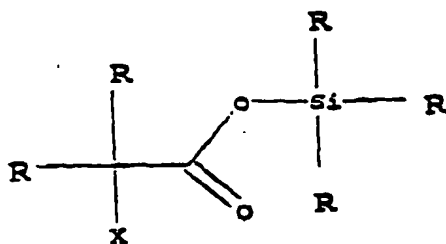
Formula 9,



Formula 10,



Formula 11, and



Formula 12,

[where] wherein R is independently selectable and is selected from the group consisting of straight chain alkyl, branched chain alkyl, cyclic alkyl, hydrogen, substituted alkyl, hydroxyalkyl, carboxyalkyl, aryl and substituted aryl and substituted benzyl, and wherein X = a halide.

Claim 11, line 3, replace "where:" with "--wherein--";

line 4, after "Cl", delete ", preferably Br";

line 6, before "where" replace "(" with "--,--";

line 7, after "Cl" delete ")";

line 10, before "where" replace "(" with "--,--";

line 10, after "Cl" delete ")";

line 10, after "-SO₃H" insert "--,--".

Claim 12, line 1, after "wherein" replace "b" with "--(b)--".

~~13.~~ (amended) A method for [The use of a catalyst according to claim 1 in the] addition polymerization of one or more olefinically saturated monomers comprising:

addition polymerizing one or more olefinically saturated monomers using the catalyst of claim 1.

~~12.~~ ~~14.~~ (amended) The [use of a catalyst] method according to claim ~~13.~~ ^{11.} wherein the addition polymerization is conducted at a temperature between -20°C to 200°C.

~~13.~~ ~~15.~~ (amended) The [use of a catalyst] method according to claim ~~14.~~ ^{12.} wherein the addition polymerization is conducted at a temperature between 20°C and 130[.]°C.

14. (amended) The [use of a catalyst] method according to claim 13, wherein the olefinically saturated [monomer] monomers [is] are selected from methyl methacrylate, ethyl methacrylate, propyl methacrylate, [(including all isomers thereof)], butyl methacrylate, [(including all isomers thereof)], [and] other alkyl methacrylates[;], corresponding acrylates[;], [also functionalised] functionalized methacrylates and acrylates [including glycidyl methacrylate, trimethoxysilyl propyl methacrylate, dialkylaminoalkyl methacrylates;], fluoroalkyl (meth)acrylates[;], methacrylic acid, acrylic acid[;], fumaric acid [(and esters thereof)], itaconic acid [(and esters thereof)], nucleic anhydride[;], styrene, α -methyl styrene[;], vinyl halides [such as vinyl chloride and vinyl fluoride;], acrylonitrile, methacrylonitrile[;], vinylidene halides of formula $\text{CH}_2\text{-C(Hal)}_2$ [where] wherein each halogen is independently Cl or F[;], optionally substituted butadiene of the formula $\text{CH}_2\text{=C}([\text{R}^{15}]\underline{\text{R}}_{15})\text{C}([\text{R}^{15}]\underline{\text{R}}_{15})\text{=CH}_2$ [where] wherein $[\text{R}^{15}]\underline{\text{R}}_{15}$ is independently H, Cl to C10 alkyl, Cl or F[;], sulphonic acids or derivatives thereof of formula $\text{CH}_2\text{=CHSO}_2\text{OM}$ wherein M is NaS, K, Li, $\text{N}([\text{R}^{16}]\underline{\text{R}}_{16})_4$, or $\text{-(CH}_2)_2\text{-D}$ [where] wherein each $[\text{R}^{16}]\underline{\text{R}}_{16}$ is independently H or Cl or C10 alkyl, D is CO_2Z , OH, $\text{N}([\text{R}^{16}]\underline{\text{R}}_{16})_2$ or SO_2OZ and Z is H, Li, Na, K or $\text{N}([\text{R}^{16}]\underline{\text{R}}_{16})_4$ [;], acrylamide or derivatives thereof of formula $\text{CH}_2\text{-C(CH}_3\text{)CON}([\text{R}^{16}]\underline{\text{R}}_{16})_2$ [;], and wherein [Mixtures] mixtures thereof [of such monomers may be used].

15. (amended) The [use of a catalyst] method according to claim 13, [where] wherein the [polymerisation] polymerization is [undertaken] conducted in water, a protic solvent or a nonprotic solvent.

16. (amended) A method for producing [The use of a catalyst according to claim 1 to produce] a statistical copolymer, a block polymer, a telechelic polymer or a comb and graft copolymer of monomers [according to previous claim], the method comprising:

producing at least one of a statistical copolymer, a block polymer, a telechelic polymer and a comb and graft copolymer of monomers using the catalyst of claim 1.